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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,245	09/28/2000	Masahiro Ishiyama	197808US2RD	7469

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EXAMINER

STRANGE, AARON N

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,245

Applicant(s)

ISHIYAMA, MASAHIRO

Examiner

Aaron Strange

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. With regard to claim 1, the specification fails to describe "selecting a domain name server in the at least one domain name system server....based at least on the IP address included in the server information and the start time of the domain name inquiry request" (emphasis added) , as recited in lines 23-27. The specification (Page 24, Line 17 to Page 25, Line 8) describes removing a temporary response from the table after a fixed period has elapsed. However, there does not appear to be any language disclosing selection of a server based on an IP address included in server information received by the DNS inquiry apparatus and the start time of a domain name inquiry request in combination. The section originally cited by Applicant in the Remarks submitted 6/18/2004 as allegedly providing support for use of the IP address in selection of a response (Page 38, Lines 18-24) does not even mention an IP address or

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selection of a response or server based on one. The cited section appears to describe the use of a failure counter in determining the optimum response.

4. With regard to claim 1, the specification fails to describe "server information changing means for rewriting said server information" wherein the server information "includes an IP address". There does not appear to be any disclosure in the specification describing rewriting an IP address when a domain name inquiry response is received.

5. Claims 3,5, and 6 contain recitations similar to claim 1 and are rejected for the same reasons as claim 1.

6. All claims not individually rejected are rejected by virtue of their dependency from the above claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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9. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They are replete with grammatical, typographical, and idiomatic errors. At least the following issues are noted. This list is intended to assist Applicant, and should not be considered a comprehensive listing of all issues present.

10. With regard to claim 1, the limitation “the at least one domain name system server”, in lines 13,16/17, and 23/24 is unclear. It is unclear how many DNS servers the request is directed to. Use of the term “the” suggests that a single server is the intended recipient of the request, however, since there may be more than one server in “at least one”, it is unclear which server or servers in the plurality of servers the request is directed to.

11. With regard to claim 1, the limitation “rewriting said server information when rewriting of said server information occurs by the domain name inquiry response received by said response receiving means” in lines 20-22 is unclear. As best understood by the Examiner, it appears that this limitation means that server information is rewritten when the response receiving means receives the response to the domain name inquiry request, and it has been interpreted as such for the purpose of applying prior art.

12. With further regard to claim 1, the limitation “request responding means for selecting a domain name server in the at least one domain name system server

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corresponding to the domain name inquiry response to said domain name inquiry request” in lines 23-25 is unclear. As best understood by the Examiner, it appears that this limitation, in combination with the limitations which follow it, means that a particular DNS server is selected based on the start time of the request and the IP address included in the server information, and it has been interpreted as such for the purpose of applying prior art.

13. Claims 3,5, and 6 contain recitations similar to claim 1 and are rejected for the same reasons as claim 1.

14. With regard to claim 8, the limitation “the at least one domain name system server”, in lines 13 and 16/17 is unclear. It is unclear how many DNS servers the request is directed to. Use of the term “the” suggests that a single server is the intended recipient of the request, however, since there may be more than one server in “at least one”, it is unclear which server or servers in the plurality of servers the request is directed to.

15. With further regard to claim 8, the limitation “that at least one domain name system server” in line 25 is unclear. It appears that Applicant may have intended for the limitation to recite “the at least one”, but that is also unclear, as discussed above.

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16. Claim 9 recites the limitation "said particular one domain name inquiry" in lines 3/4 and 7. There is insufficient antecedent basis for this limitation in the claim.

17. Claims 10, 12, and 13 contain recitations similar to claim 8 and are rejected for the same reasons as claim 8.

18. Claims 11 and 14 contain recitations similar to claim 9 and are rejected for the same reasons as claim 9.

19. All claims not individually rejected are rejected by virtue of their dependency from the above claims.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. As best understood by the Examiner, claims 1-7, as currently presented, appear to be directed to a system in which the domain name system (DNS) inquiry apparatus receives a list of DNS servers containing an IP address, receives domain name inquiry from a client directed to one of the servers, forwards it to one or more of the DNS

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servers on the list, selects an optimum response based on the both an IP address from the list of DNS servers and start time of the inquiry, and forwards the optimum response back to the client.

22. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. (US 6,578,066) in view of Elz et al. ("RFC 2182").

23. In regards to claim 1, Logan discloses a domain name system inquiry apparatus comprising:

current location information receiving means for receiving location information of the apparatus itself on a connected network (by resolving the request, the receiving means determines the location of a client on the network, col 10 lines 52-57);

current location management means for storing location information received by said current location information receiving means (this information is temporarily stored for checking the information versus a table of server locations);

server information receiving means for receiving server information regarding a domain name system server to which an inquiry can be made, said server information including an IP address (The switch examines the hand-off table for determining a server to hand off to, col 10 lines 58-62, the table including IP addresses);

server management means for storing the server information received by said server information receiving means (a hand off table is stored for all the servers, col 10 lines 58-62 discusses the use of the table);

request receiving means for receiving an inquiry request to a domain name system server from a client (a request is received from a client, col 10 lines 52- 57);

request transferring means for transferring the inquiry request received by said request receiving means to at least one domain name system server based on at least one of said location information and said server information (the switch determines a server to hand off the request to, transferring the inquiry, col 10 lines 58-62);

response receiving means for receiving a response to the inquiry request transferred by said request transferring means (numerous responses can be received and forwarded by the switch, col 10 line 62-65);

server information changing means for rewriting said server information when rewriting of said server information occurs by the response received by said response receiving means: (col 5 line 60 - col 6 line 41 discusses the health tests including running the tests several times, thereby altering the results set each time)

request responding means for selecting a response result corresponding to said inquiry request based at least on the IP address included in the server information and for sending the selected response result to said client (an ordered list is sent to the client, with the most appropriate server being given priority, col 10 lines 58-65).

Logan further discloses storing the start time of requests, since they are used to determine the response times of the remote servers (Col 6, Lines 21-35), and selecting the servers based on the start time (Fastest servers are chosen) (Col 6, Lines 30-35).

Logan fails to specifically disclose that the redundant servers are DNS servers. However, redundant DNS servers are well known in the art, as evidenced by Elz.

Elz teaches the use of multiple DNS servers to allow clients around the world to reliably reach a DNS server in the event that one is unavailable, as well as reduce the load on the primary DNS server for the zone. Using DNS servers in the system disclosed by Logan would be extremely advantageous since it would allow clients to locate the best DNS server from the group of redundant servers to sent their resolution requests. Since name resolution requests must be completed before content may be retrieved, using the fastest DNS server for each client could greatly reduce the overall latency experienced by that client.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system disclosed by Logan to select the fastest DNS server for each client so that the latency of content requests would be reduced and the load on the DNS servers would be balanced among the redundant secondary DNS servers.

24. In regards to claim 2, Logan further discloses:

algorithm receiving means for receiving an algorithm for selecting said response result (a health check is done, which is an algorithmic examination of the network and the servers, col 5 line 60 - col 6 line 41);

algorithm management means for storing the algorithm received by said algorithm receiving means (the algorithm is stored by the checking system, tables I-IV show the details of the algorithms);

algorithm processing means for selecting the response result in said request responding means by using the algorithm stored in said algorithm management means (the results of the algorithmic expression are searched and the most appropriate response is found and forwarded to the client, col 10 lines 37-65).

25. Claims 3,5, and 6 are rejected for the reasons cited above with regard to claim 1, since they recite substantially identical subject matter.

26. Claims 4 and 7 are rejected for the reasons cited above with regard to claim 2, since they recite substantially identical subject matter.

27. As best understood by the Examiner, claims 8-14, as currently presented, appear to be directed to a similar system as claims 1-7, except that a failure counter is present in the list of DNS servers rather than an IP address and the selection of an optimum response is based on the failure counter in combination with the start time of the domain name inquiry.

28. Claims 8-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. (US 6,578,066) in view of Elz et al. ("RFC 2182").

29. In regards to claim 8, Logan discloses a domain name system inquiry apparatus comprising:

Current location information receiving means for receiving location information of the apparatus itself on a connected network (by resolving the request, the receiving means determines the location of a client on the network, col 10 lines 52-57).

current location management means for storing location information received by said current location information receiving means (this information is temporarily stored for checking the information versus a table of server locations);

server information receiving means for receiving server information regarding a domain name system server to which an inquiry can be made, said server information including a failure counter (The switch examines the hand-off table for determining a server to hand off to, col 10 lines 58-62; the table using an algorithm to calculate server information including a server health test, which measures various times associated with the server, including throughput times and calculates levels considered to be potential failures, col 5 line 60 - col 6 line 41 discusses the health tests);

server management means for storing the server information received by said server information receiving means (a hand off table is stored for all the servers, col 10 lines 58-62 discusses the use of the table);

request receiving means for receiving an inquiry request to a domain name system server from a client (a request is received from a client, col 10 lines 52- 57);

request transferring means for transferring the inquiry request received by said request receiving means to at least one domain name system server based on at least one of said location information and said server information (the switch determines a server to hand off the request to, transferring the inquiry, col 10 lines 58-62);

response receiving means for receiving more than one response to the inquiry request transferred by said request transferring means (numerous responses can be received and forwarded by the switch, col 10 line 62-65);

server information changing means for rewriting said failure counter based on at least one of the more than one response received by said response receiving means (col 5 line 60 - col 6 line 41 discusses the health tests including running the tests several times, thereby altering the results set each time);

request responding means for selecting a particular one response from the more than one response to the inquiry request based at least in part on the failure counter included in the server information and for sending the particular one response to said client (an ordered list is sent to the client, with the most appropriate server being given priority, col 10 lines 58-65).

Logan further discloses storing the start time of requests, since they are used to determine the response times of the remote servers (Col 6, Lines 21-35), and selecting the servers based on the start time (Fastest servers are chosen) (Col 6, Lines 30-35).

Logan fails to specifically disclose that the redundant servers are DNS servers. However, redundant DNS servers are well known in the art, as evidenced by Elz.

Elz teaches the use of multiple DNS servers to allow clients around the world to reliably reach a DNS server in the event that one is unavailable, as well as reduce the load on the primary DNS server for the zone. Using DNS servers in the system disclosed by Logan would be extremely advantageous since it would allow clients to locate the best DNS server from the group of redundant servers to sent their resolution

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requests. Since name resolution requests must be completed before content may be retrieved, using the fastest DNS server for each client could greatly reduce the overall latency experienced by that client.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system disclosed by Logan to select the fastest DNS server for each client so that the latency of content requests would be reduced and the load on the DNS servers would be balanced among the redundant secondary DNS servers.

30. In regards to claim 9, Logan discloses a domain name system inquiry apparatus, further comprising:

algorithm receiving means for receiving an algorithm for selecting said particular one response result (a health check is done, which is an algorithmic examination of the network and the servers, col 5 line 60 - col 6 line 41);

algorithm management means for storing the algorithm received by said algorithm receiving means (the algorithm is stored by the checking system, tables I-IV show the details of the algorithms);

algorithm processing means for selecting said particular one response result in said request responding means by using the algorithm stored in said algorithm management means (the results of the algorithmic expression are searched and the most appropriate response is found and forwarded to the client, col 10 lines 37-65).

31. Claims 10, 12, and 13 are rejected for the reasons cited above with regard to claim 8, since they recite substantially identical subject matter.

32. Claims 11 and 14 are rejected for the reasons cited above with regard to claim 9, since they recite substantially identical subject matter.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

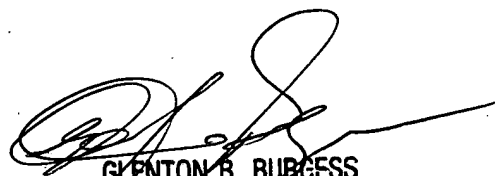
34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS
6/17/2005



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